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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/606,472	06/25/2003	Theodore M. Boyd-Davis	BING-1-1003	3520

25315 7590 04/20/2006

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EXAMINER
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TALBOT, MICHAEL

ART UNIT	PAPER NUMBER
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3722

DATE MAILED: 04/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/606,472

Applicant(s)

BOYL-DAVIS ET AL

Examiner

Michael W. Talbot

Art Unit

3722

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-14,16-22,24-29 and 31-42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5-9 and 17-21 is/are allowed.
- 6) ☒ Claim(s) 1,2,4,10-14,16,22,24-29 and 31-42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/21/05</u> | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1,2,10-14,22,24-29 and 32-35 are rejected under 35 U.S.C. 102(b) as being anticipated by Adams '436. Adams '436 shows in Figures 1-5b an apparatus comprising a track assembly (11) adapted to the workpiece (12,14) via fasteners (28) and mounting steps (25) and vacuum pads (29), a carriage (15) including a tool support (62 in Fig. 17) adapted to receive a manufacturing drill tool (17) moveably (col. 3, lines 20-27) coupled to the track assembly and moveable relative to the translational axis (x-axis) and an opposing-force support assembly (22) coupled to the carriage and adapted to be secured to the workpiece to at least partially counterbalance a manufacturing force exerted on the workpiece by the manufacturing tool (col. 3, lines 20-37). Adams '436 shows the opposing-force support assembly including a clamp-up pin (23) adapted to engage a hole (13) in the workpiece and a clamp-up actuator (102) adapted to actuate the clamp-up pin into secure engagement with the workpiece. Adams '436 shows the track assembly including one rail (11) and the carriage is rollably (34,35) coupled to the rail (col. 3, line 71 through col. 4, line 9) in the translation direction (x-axis) and along the y-axis through slot (at 59,128). Adams '436 shows the carriage including a drive assembly (144,145,147) having a drive motor (144) operatively engaging the track and adapted to drive the carriage along the track (col. 7, line 73 through col. 8, line 38).

3. Claims 36 and 40-42 are rejected under 35 U.S.C. 102(b) as being anticipated by Hanger '927. Hanger '927 shows in Figures 1-6 an apparatus comprising a track assembly

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(66,68) adapted to the workpiece (224) via template (46) and feet (14,16,18,76,78), a carriage (80) including a tool support (12) adapted to receive a manufacturing drill tool (55) moveably coupled to the track assembly and moveable relative to a translational axis via slot (col. 3, lines 62-70) and an opposing-force support assembly (36,87) coupled to the carriage and adapted to be secured to the workpiece to at least partially counterbalance a manufacturing force exerted on the workpiece by the manufacturing tool (col. 2, lines 59-66 and col. 4, lines 10-31). Hanger '927 shows wherein at least one of the carriage and the tool support are moveable relative to the opposing-force support assembly such that a manufacturing operation may be performed at a plurality of locations on the workpiece relative to the opposing-force support assembly when the opposing-force support assembly is secured at a single support location to the workpiece (col. 6, lines 64-71). Hanger '927 shows the opposing-force support assembly including a clamp-up pin (87) adapted to engage a hole (218) in the workpiece (224) and a clamp-up actuator (col. 5, line 53- col. 6, line 30) adapted to actuate the clamp-up pin into secure engagement with the workpiece.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4,16 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adams '436 in view of Alam et al. 2004/0076484. Adams '436 lacks the opposing-force support assembly including a threaded pin adapted to threadedly engage a threaded hole in the workpiece. Alam et al. 2004/0076484 shows a thread adjustable member (14) operably in contact with a curved workpiece (18) prior to performing a drill operation. In view of this

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teaching of Alam et al. 2004/0076484, it would have been obvious to replace the clamp-up pin of Adams '436 with the threaded construction of Alam et al. 2004/0076484 to provide a more secure connection between the apparatus and workpiece thus increasing the stabilization of the manufacturing operation resulting in quicker, more precise drilling holes.

Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hanger '927 in view of Alam et al. 2004/0076484. Hanger '927 lacks the opposing-force support assembly including a threaded pin adapted to threadedly engage a threaded hole in the workpiece. Alam et al. 2004/0076484 shows a thread adjustable member (14) operably in contact with a curved workpiece (18) prior to performing a drill operation. In view of this teaching of Alam et al. 2004/0076484, it would have been obvious to replace the clamp-up pin (87) of Hanger '927 with the threaded construction of Alam et al. 2004/0076484 to provide a more secure connection between the apparatus and workpiece thus increasing the stabilization of the manufacturing operation resulting in quicker, more precise drilling holes.

6. Claims 38 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hanger '927 in view of Adams '436. Hanger '927 lacks the carriage being rollably coupled to the rail. Adams '436 shows the track assembly including one rail (11) and the carriage is rollably (34,35) coupled to the rail (col. 3, line 71 through col. 4, line 9) in the translation direction (x-axis) and along the y-axis through slot (at 59,128). In view of this teaching of Adams '436, it would have been obvious to replace the sliding carriage (80) of Hanger '927 with a rollable carriage assembly taught by Adams '436 to provide a smoother translational movement of the carriage and manufacturing tool along the workpiece minimizes the effort exerted during set-up and increasing the precision.

***Allowable Subject Matter***

7. Claims 5-9 and 17-21 are allowed.

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Claims 5 and 17 are the independent claims.

The Prior Art of Record fails to anticipate or make obvious, solely or in combination, the opposing-force support assembly comprising a first member coupled to the carriage and moveable along a first axis, a first actuator coupled to the first member and to the carriage to move the first member along the first axis, a second member coupled to the first member and moveable along a second axis orthogonal with respect to the first axis, a second actuator coupled to the second member and to the first member to move the second member along the second axis, and a securing device coupled to the second member.

Adams '436 is the best art of record.

Adams '436 lacks the opposing-force support assembly (22) comprising a second member coupled to the first member (94) and moveable along a second axis orthogonal with respect to the first axis (x-axis), a second actuator coupled to the second member and to the first member to move the second member along the second axis, and a securing device coupled to the second member.

### ***Response to Arguments***

8. Applicant's arguments filed 19 January 2006 have been fully considered but they are not persuasive.

Applicant's arguments that the Adams '436 reference does not teach "the track assembly including a vacuum cup assembly adapted to secure to a surface of the workpiece" as now recited in claims 1,13 and 27 is respectfully non persuasive. Adam's 436 clearly shows in Figures 1,3,4 and col. 3, lines 62-69 a vacuum cup assembly (29) adapted to secure the track assembly (11) to the workpiece (12,14).

### ***Conclusion***

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9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

10. Any inquiry concerning the content of this communication from the examiner should be directed to Michael W. Talbot, whose telephone number is 571-272-4481. The examiner's office hours are typically 8:30am until 5:00pm, Monday through Friday. The examiner's supervisor, Mr. Boyer D. Ashley, may be reached at 571-272-4502

In order to reduce pendency and avoid potential delays, group 3720 is encouraging FAXing of responses to Office Actions directly into the Group at FAX number 571-273-8300. This practice may be used for filling papers not requiring a fee. It may also be used for filing papers, which require a fee, by applicants who authorize charges to a USPTO deposit account. Please identify Examiner Michael W. Talbot of Art Unit 3722 at the top of your cover sheet.



MWT  
Examiner  
14 April 2006



BOYER D. ASHLEY  
SUPERVISORY PATENT EXAMINER